



**AGROECOLOGY EUROPE  
FORUM 2023 IN HUNGARY**  
CONVERGING MOVEMENTS  
FOR **RESILIENT FOOD SYSTEMS**  
16-18 November 2023  
Gyöngyös, Hungary

# Complementarity of different types of research infrastructure investigating regenerative soil management



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## SESSION 8: LONG-TERM RESEARCH FOR AGROECOLOGY

ORGANISED BY:



WITH THE SUPPORT OF:

**#AEEUForum2023**



# DIFFERENT TYPES OF RESEARCH INFRASTRUCTURE

## OVERVIEW

### Field experiments at research institutes

- Multiyear multifactorial soil management experiments
- Multiyear experimenting with innovative cropping systems

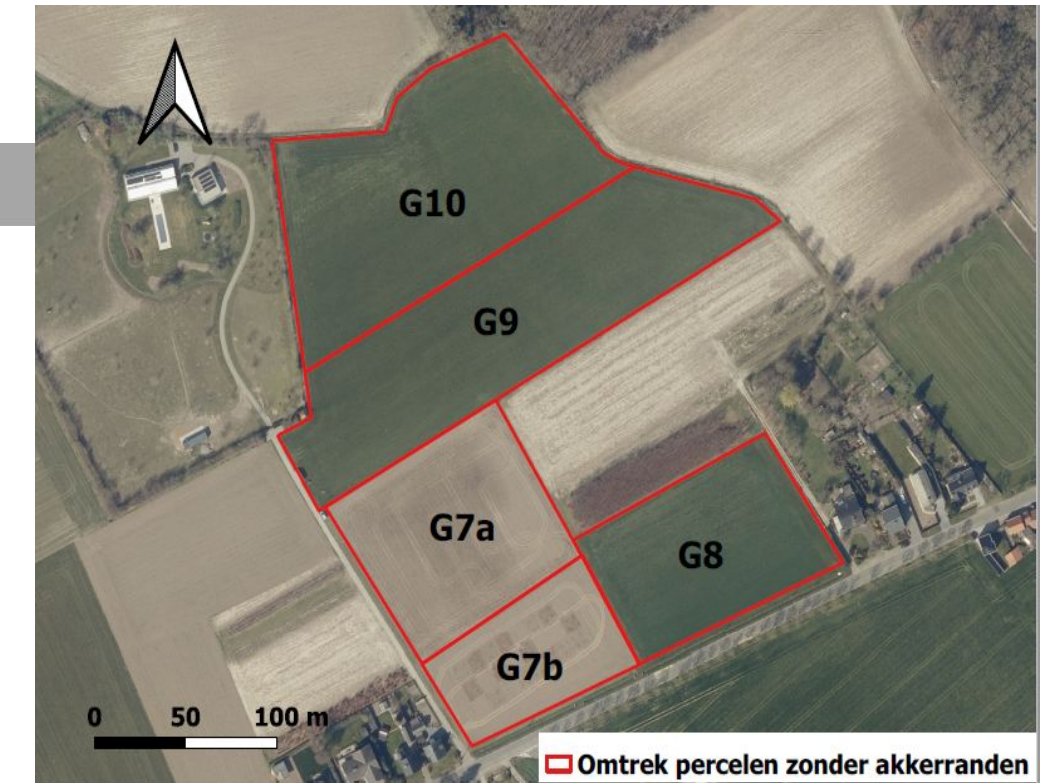
### Participatory research in a real-life settings

- Validation trials on individual farmers' fields, testing individual soil management measures
- Multiple farmer's fields monitoring for an extensive parameter set
- Lighthouse farm, e.g., Experimental Platform for Agroecology in Hansbeke <https://www.ppaehansbeke.be/en/>
  - System analysis, design and monitoring, e.g., HORIZON-project Agromix
  - Experimenting with innovative cropping systems

# Multiyear multifactorial **soil management** test sites @ILVO

Crop rotation, crops and projects  
Experimental fields G7-G10  
(5,7 ha certified organic)

	G7a	project	G7b	project	G8	project	G9-G10
2010	grass clover		grass clover				
2011	grass clover		grass clover				
2012	leek	Symbios	grass clover				
2013	celeriac	Symbios	grass clover				
2014	spring wheat		grass clover				
2015	potatoes	Project cut-and-carry fert	grass clover				
2016	headed cabbage	Project cut-and-carry / Soilveg	grass clover				
2017	headed cabbage	Soilveg	cover crop mixture				
2018	soy	La vie est belle	soy	La vie est belle	spring barley - grass clover		grass clover
2019	spelt		spelt		grass clover	Klavertroef	grass clover
2020	potatoes		potatoes	VLM-project	grass clover	Klavertroef	grass clover
2021	grass clover	Klavertroef	leek	VLM-project	leek	Wikileeks	grass clover
2022	grass clover	Klavertroef	spring barley	Soildiveragro	maize-bean	Farmers Benefits	grass clover
2023	grass clover		headed cabbage	Soildiveragro	maize-bean	Farmers Benefits	winter wheat



Luchtfoto (winteropname **2020**) [Geopunt Vlaanderen](#).

# Multiyear multifactorial **soil management** test site@ILVO

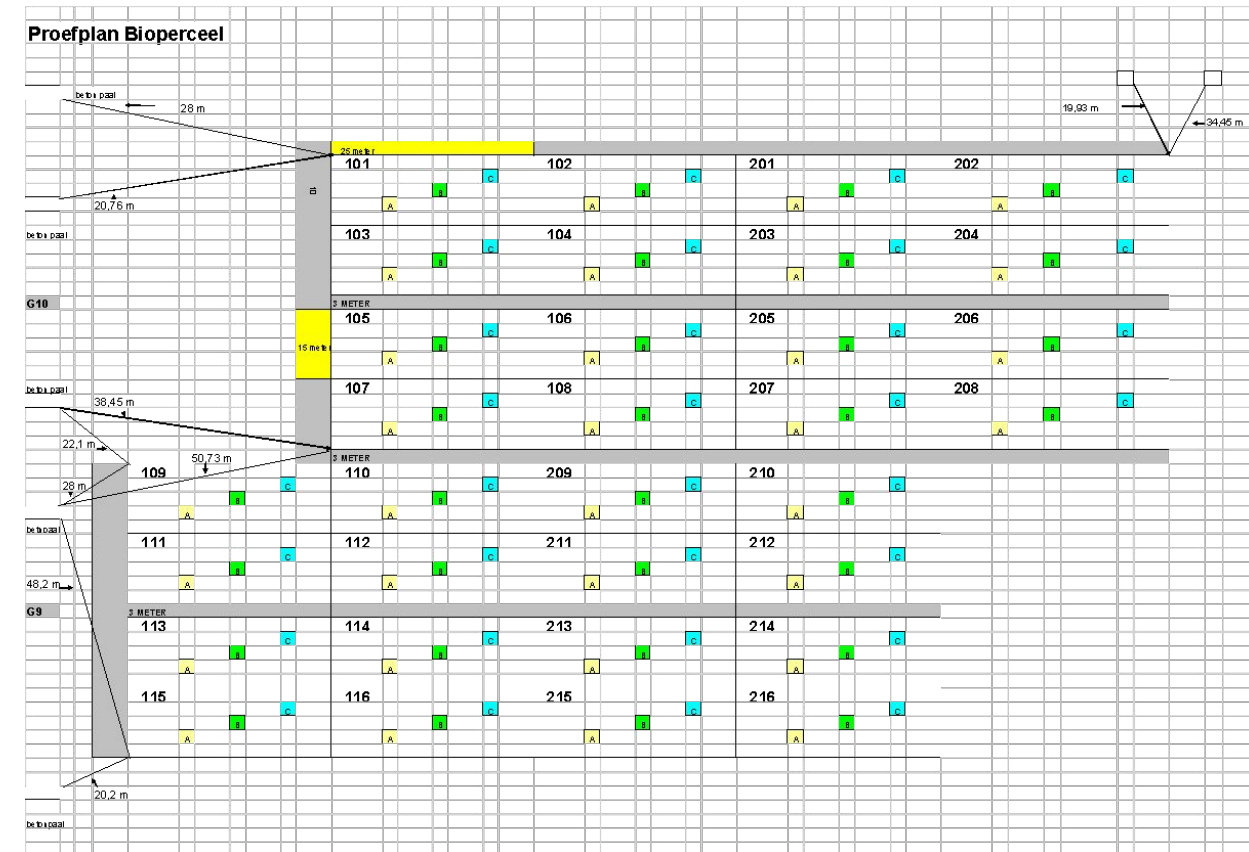
First multiyear soil management field experiment@ILVO

Organically managed fields:

- ✓ G10: 2005-2008: maize - potatoes – summer barley – red clover
- ✓ G9: 2006-2009: maize - potatoes – summer barley – red clover

Two treatments

- ✓ Farm compost - reduced tillage (non-inversion)
- ✓ Farm yard manure – mouldboard ploughing



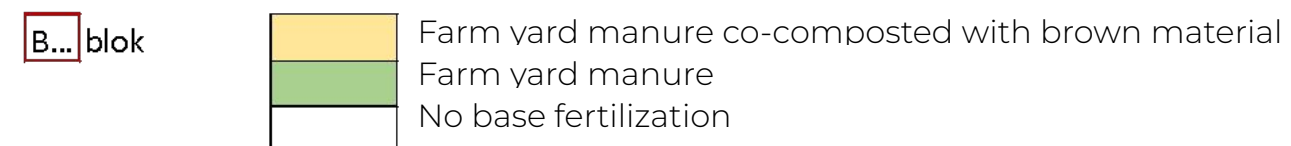
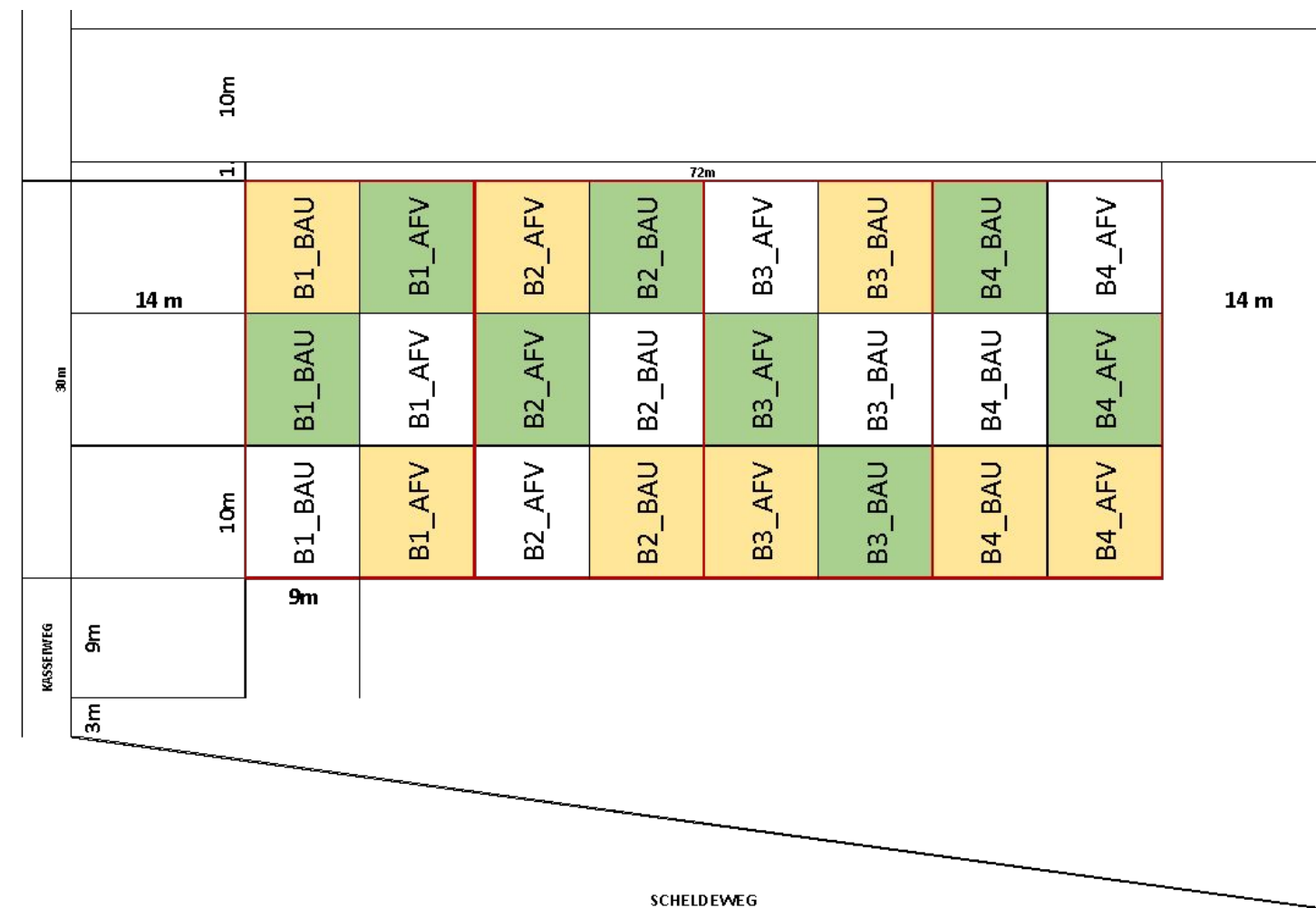
# Multiyear multifactorial **soil management** test site@ILVO

Organically managed field G7b

2019-2023: spelt – potatoes – leek – spring barley – headed cabbage

Factors

- Fertilization: Farm yard manure versus Farm yard manure co-composted with brown material versus no base fertilization
- Either removal (AFV, fodder production) or incorporation of the cover crop (BAU = Business as usual)



VLM-BIO project  
HORIZON-project Soildiveragro

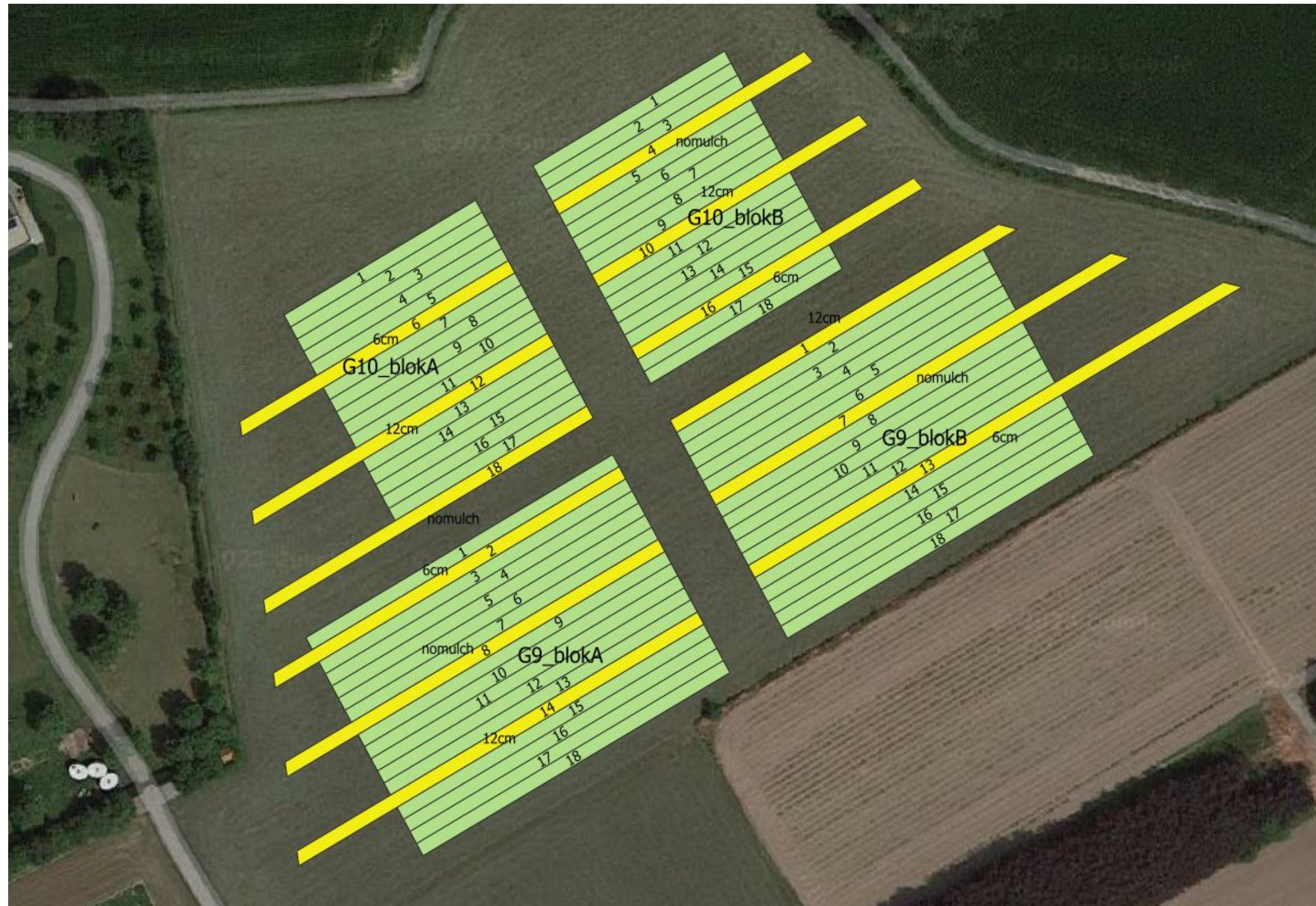
# Multiyear experimenting with **strip cropping system**@ILVO, 2023-...

Organically managed arable cropping system, fields G9-G10

Grass-clover (2 years) – wheat – potatoes – maize x climbing bean - quinoa

4 blocks, 18 strips (3m width) per block

Each crop each year in 3 of 18 strips per block



# Experimental Platform for Agroecology in Hansbeke

<https://www.ppaehansbeke.be/en/>



● **Roller-Crimping + Direct drill of cereals in biomax**



**Field margin strips**



**Mixed cropping:  
legumes + cereals**

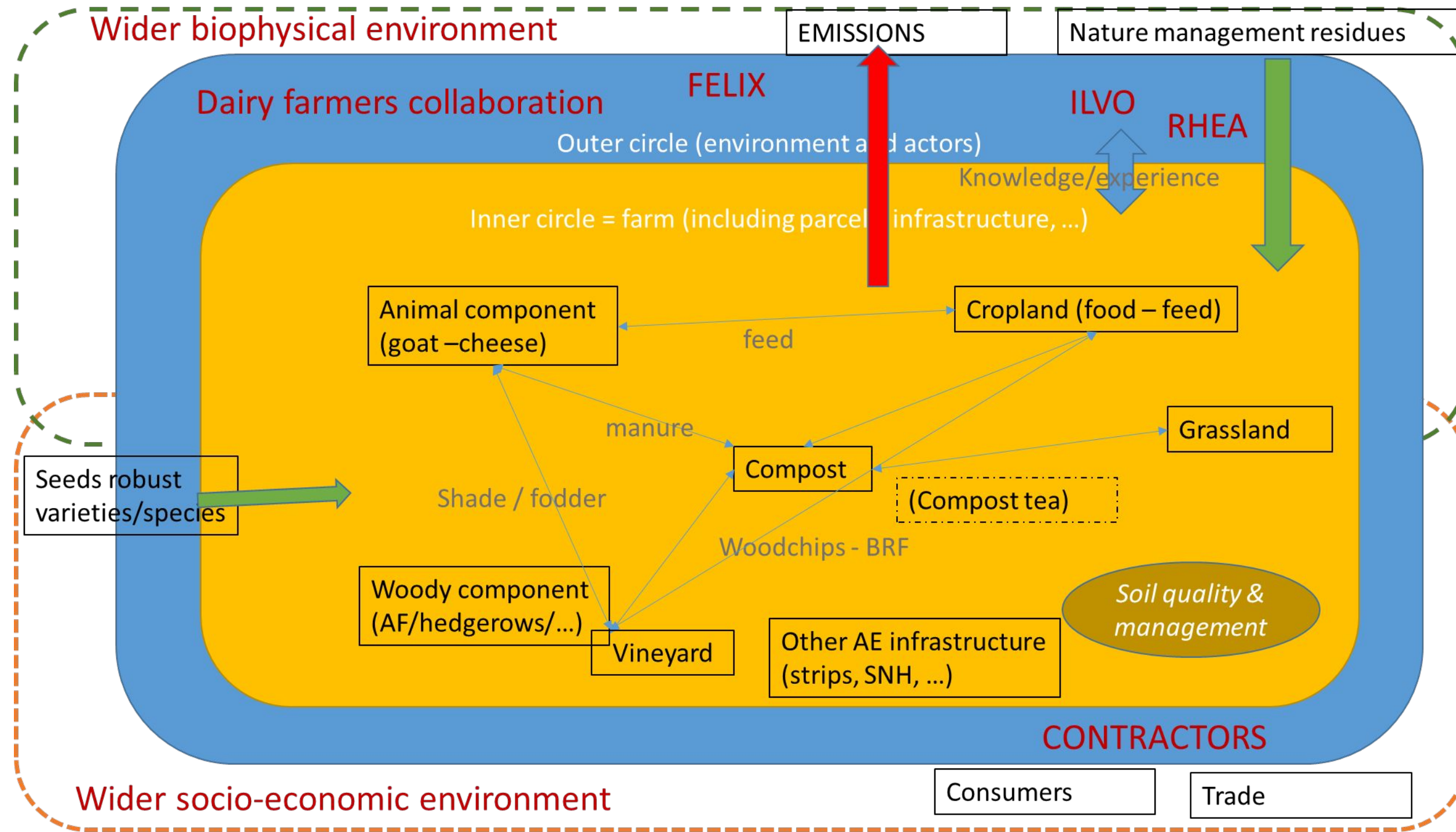


**Grass-clover as temporary grassland**



**Competitive cereals, old varieties or  
organically selected**

# System analysis, design and monitoring Experimental Platform for Agroecology in Hansbeke







Experimenting with innovative cropping system  
Growing cereals in a permanent cover of white clover  
Experimental Platform for Agroecology in Hansbeke

